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7a. NAME OF MONITORING ORGANIZATION

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SMCAR-AEP

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Performance Oriented Packaging Report for Charge, Demolition Block, 1
Pound or 1/2 Pound (TNT) w/ Priming Adapters M1A4

12. PERSONAL AUTHOR(S)

Sniezek, Frank

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18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)

Performance Oriented Packaging, POP,
Charge, Demolition Block, 1 Pound or
1/2 Pound (TNT), Mil-B-2427 Wood Box

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This POP report is for the Charge, Demolition Block, 1 Pound or 1/2 Pound (TNT) w/ Priming Adapters M1A4, which are packaged 96-1/2 Pound or 48-1 Pound charges/Mil-B-2427 wood box. This report describes the results of testing conducted on a similar packaging which is used as an analogy for this item.

DISTRIBUTION STATEMENT A

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20. DISTRIBUTION/AVAILABILITY OF ABSTRACT

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21. ABSTRACT SECURITY CLASSIFICATION

Unclassified

22a. NAME OF RESPONSIBLE INDIVIDUAL

STEVE RUFFINI

22b. TELEPHONE (Include Area Code)

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22c. OFFICE SYMBOL

SMCAR-AEP

I. REPORT NUMBER: DOD POP HMTR/AYD 91-004

II. TITLE: Performance Oriented Packaging Report for Charge, Demolition Block, 1 Pound or 1/2 Pound (TNT) w/ Priming Adapters M1A4

AUTHOR: Frank M. Sniezek

PERFORMING ACTIVITY: ARDEC

ADDRESS: Department of the Army
ARDEC, SMCAR-AEP
HQ, U.S. Army Armament, Munitions, and Chemical Command
Picatinny Arsenal, NJ 07806-5000

DATE: 2 Nov 92

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92-31311



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1. DATA SHEET

CONTAINER

Type: Box

UN Code: 4C1

Nomenclature: Box, Packing, Ammunition, for Charge, Demolition Block,
1 Pound or 1/2 Pound (TNT) w/ Priming Adapters M1A4

Specification Number: Type II, Grade A, Class 2, Mil-B-2427

Drawing Number: 8799162

Material: Wood

Gross Weight: 71.5 pounds

Outside Dimensions: 22 1/2 x 11 1/4 x 9 5/8

Inside Dimensions: 19 1/2 x 9 3/4 x 7 5/16

PRODUCT

Name: 1 Pound or 1/2 Pound (TNT) w/ Priming Adapters M1A4

Drawing Number: 8885249 (Charge, 1 Pound)
8885245 (Charge, 1/2 Pound)

United Nations Number: 0048

Physical State: Solid

Amount per Container: 96-1/2 Pound TNT w/24 Priming Adapters M1A4
48-1 Pound TNT w/12 Priming Adapters M1A4

2. BACKGROUND, TESTS, AND RESULTS

Reference the following document:

- a. 49CFR, October 1, 1991 Edition

Instead of testing the specific container used for the 1/2 and 1 Pound Demolition Charges, three wooden boxes built to the same specification but packed with a fiberboard box loaded with sand were tested. The corresponding weight and dimensions of the tested box are as follows:

Gross Weight: 90 pounds

Outside Dimensions: 24 x 11 3/8 x 10

Inside Dimensions: 20 7/8 x 9 3/4 x 7 5/8

This falls within the guidelines for analogy IAW Variation III of para. 178.601(g)(3) of Reference a.

A Stacking Test was conducted on one container with a weight of 1600 pounds for 72 hours in lieu of three containers for 24 hours. This weight exceeds the minimum requirement for a 10 foot stack height which is 1080 pounds.

A Loose Cargo Test was conducted on three containers for one hour. The packages were tested at a vibration table frequency such that the bottom of the packages were raised 1/4 inch from the platform, which exceeds the requirement of 1/16 inch.

A Four Foot Drop Test was conducted on one of the containers that was subjected to the Loose Cargo Test. One container was dropped five times at different orientations as follows: top, bottom, long side, short side, and a top corner at the closure. This exceeds the requirement of one drop per container.

Test results indicated no leakage or spillage of the contents from the containers following any of the tests conducted, meeting the requirements of the 49 CFR.